

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/005505 A1

(51) International Patent Classification⁷: **C08G 18/10**,
18/75, 18/48

(74) Agents: **HEPP, Dieter et al.**; Hepp Wenger Ryffel AG,
Friedtalweg 5, CH-9500 Wil (CH).

(21) International Application Number:
PCT/EP2004/007285

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 3 July 2004 (03.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03015873.7 11 July 2003 (11.07.2003) EP

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): **SICPA HOLDING S.A.** [CH/CH]; Avenue de Florissant 41, CH-1008 Prilly (CH).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **EUGÈNE, Denis** [FR/FR]; 369 Aue Bénite Fontaine, Les Hortensias App 16, F-74800 La Roche sur Foron (FR). **EISELÉ, Gilles** [FR/FR]; Chez Mermier, F-74250 Fillinges (FR). **CATHERIN, Gilles** [FR/FR]; Presbytère, Rue de L'Eglise 25, F-01630 St. Genis Pouilly (FR).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A POLYURETHANE RESIN FOR COLOR INKS

(57) Abstract: The present invention is related to a polyurethane resin, obtainable by reacting 1-isocyanato-5-isocyanatomethyl-3,3,5-trimethylcyclohexane (isophorone diisocyanate (IPDI)) alone or together with one or more aliphatic diisocyanates, with a polyether polyol having an average molecular weight in the range of 1000 to less than 3000 g/mol; adding a diamine; adding a polyol having an average molecular weight of equal or less than 800 g/mol; and optionally reacting the product obtained in steps a) to c) with at least one terminating agent, wherein the ratio of equivalent weights of diisocyanates to the group of isocyanate-reactive components consisting of the said polyether polyol, the said diamine, the said polyol, and the said terminating agent is 1:1 or greater than 1.

WO 2005/005505 A1